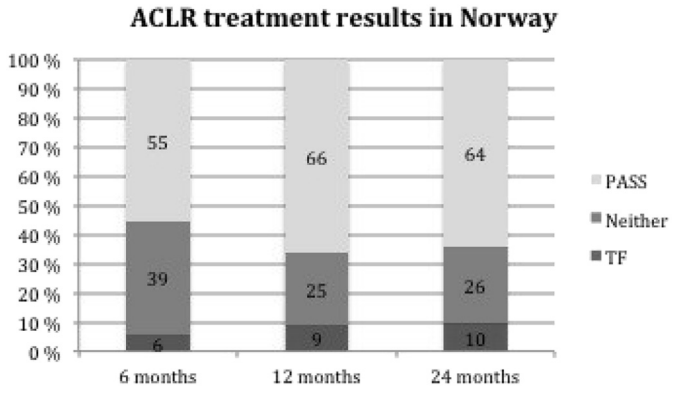

measure where 5 subscales are scored separately on a 0 (worst) to 100 (best) scale; Pain, Symptoms, Activities of Daily Living (ADL), Sport and Recreational activities (Sport/Rec) and Quality of Life (QOL). The PASS anchor question was: "Considering your knee function, do you feel that your current state is satisfactory? With knee function you should take into account all activities during your daily life, sport and recreational activities, your level of pain and other symptoms, and also your knee related quality of life." The TF anchor question was: "Would you consider your current state as being so unsatisfactory that you think the treatment has failed?". Both questions were answered "Yes" or "No". The patients that answered "Yes" to the PASS question were considered to have reached a PASS. The subgroup of patients that answered "No" to the PASS question and "Yes" to the TF question were considered to be treatment failures. The remaining patients were considered to be neither.

Results: 744 patients (45% women, mean age 28.7) responded: 246 (62%) at 6 months, 261 (65.3%) at 12 months and 237 (59.3%) at 24 months postoperatively. Figure 1 presents the percentages of patients reaching PASS and TF for each follow-up time point respectively. For all time points, 55–66% of patients undergoing an ACLR considered themselves to have reached a PASS postoperatively. 6–10% of the patients considered the treatment to have failed.

Mean KOOS scores at the three follow-up time-points for the patients reaching PASS ranged from 88–91 for the subscale Pain, 82–85 for Symptoms, 94–96 for the subscale ADL, 69–77 for the subscale Sport/Rec and 72–76 for the subscale QOL. The patients that considered that the treatment had failed had worse mean KOOS scores (Pain 57–58, Symptoms 54–57, ADL 69–73, Sport/Rec 26–32, QOL 25–31). The patients that did not consider their symptoms state acceptable, but not severe enough to consider themselves treatment failures, had mean KOOS scores in between the groups achieving PASS and TF (Pain 74–81, Symptoms 70–75, ADL 82–89, Sport/Rec 49–59 and QOL 51–57).

Conclusions: Half of the patients at six months and about two-thirds at 1–2 years consider themselves to have achieved an acceptable symptom state after receiving a primary ACLR. Mean KOOS scores were reflective of patient's perception about treatment outcome after ACLR. Patients achieving an acceptable symptom state had KOOS scores corresponding to on average no to mild problems while for treatment failures the KOOS scores corresponded to on average moderate to severe problems.

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THE ASSOCIATION BETWEEN HIP EFFUSION AND CLINICAL, MRI AND RADIOLOGICAL FINDINGS

H. Ahedi †, D. Aitken †, L. Blizzard †, C. Ding †‡, F. Cicuttini ‡, G. Jones †. † *Menzies Res. Inst., Univ. of Tasmania, Hobart, Australia;* ‡ *DEPM, Sch. of Publ. Hlth.and Preventive Med., Monash Univ., Melbourne, Australia*

Purpose: The aim of this cross-sectional study was to describe the associations between hip effusion, hip pain, MRI-detected abnormalities and radiological hip osteoarthritis (ROA).

Methods: A total of 244 subjects from the Tasmanian Older Adult Cohort [TASOAC] with a right hip STIR-weighted MRI were included in this study. Presence and size of hip effusion was assessed at either the anterior or posterior side of the femoral head using OsiriX imaging software. The observer manually selected the MR slice (sagittal) with the largest effusion and measured the maximum cross-sectional area (CSA). Hip pain was determined by WOMAC [Western Ontario and McMaster Universities Osteoarthritis Index]. Presence of cartilage defects; hip BMLs and high cartilage signal were assessed. Finally, joint space narrowing (JSN, 0–3) and osteophytes (0–3) were assessed on X-ray using Altman's atlas. Log binomial regression and linear regression were applied to examine the relationships between hip effusion, hip pain, MRI and radiological findings.

Results: 228 [93%] subjects had hip effusion [presumably physiological and/or pathological] located, either at anterior or posterior sides of the femoral head. Subjects without and with hip effusion had no statistical differences in mean age and sex but subjects with hip effusion were heavier [BMI: 26.1 v 27.9, $p = 0.04$] in comparison to those without hip effusion. Hip effusion did not associate with presence or severity of hip pain. Larger hip effusion size was associated with presence of femoral defects, especially full thickness femoral defects [mean ratio: 1.34 95%CI 1.03, 1.65]. Acetabular defects did not associate with hip effusion. On the other hand, anterior hip effusion but not other sites, associated with presence of high cartilage signal [PR: 1.20 95%CI 1.01, 1.43]. Surprisingly, BMLs were associated with a significantly lower prevalence of effusion. Overall, radiological hip OA [grade>3] was associated with 8–10% higher prevalence of hip effusion and joint space narrowing [grade 3] was associated with higher prevalence of hip effusion [PR: 1.10 95%CI 1.04, 1.16].

Conclusion: Hip effusion is asymptomatic in this cohort but is associated with hip cartilage defects, JSN and osteophytes.

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OBESITY IS ASSOCIATED WITH REDUCED DISC HEIGHT IN THE LUMBER SPINE BUT NOT AT THE LUMBOSACRAL JUNCTION

D.M. Urquhart †, I. Kurniadi †, K. Triangto †, Y. Wang †, A.E. Wluka †, R. O'Sullivan †, G. Jones ‡, F.M. Cicuttini †. † *Monash Univ., Melbourne, Australia;* ‡ *Menzies Res. Inst., Hobart, Australia*

Purpose: Although obesity is a recognised risk factor for low back pain, our understanding of the mechanisms for this is limited. The evidence for an association between obesity and spinal structural changes is also conflicting. The aim of this study was to investigate the relationships between obesity, disc height and low back pain in the lumbosacral spine.

Methods: 72 participants from a community-based study of musculoskeletal health underwent Magnetic Resonance Imaging from the T12 vertebral body to the sacrum. Disc height was measured from L1/2 to L5/S1. Body mass index was measured and low back pain in the previous 2 weeks was assessed.

Results: The mean and total lumbar disc heights were reduced in obese compared to non-obese individuals (mean height(SE): 1.04(0.03)cm vs 1.14(0.02)cm, $p = 0.01$; total height(SE): 4.16(0.11)cm vs 4.57(0.10)cm, $p = 0.01$), after adjusting for age, gender and height. While obesity was associated with reduced disc heights at the L1/2 and L3/4 levels, there were no significant relationship at the lumbosacral junction (mean difference (95%CI): 0.10(−0.14, 0.16)cm, $p = 0.89$). Both mean and total lumbar disc heights were negatively associated with recent pain after adjusting for age, gender and height (mean height: mean difference (95%CI): 0.09(0.02, 0.17)cm, $p = 0.02$; total height: mean difference (95% CI): 0.37(0.07,0.66)cm, $p = 0.02$). However, these relationships were no longer significant when we also adjusted for weight (mean height; mean difference (95%CI): 0.07(−0.009,0.15)cm, $p = 0.08$; total height: mean difference (95%CI): 0.28(−0.04, 0.60)cm, $p = 0.08$). There were no significant relationships between disc height and recent pain at the lumbosacral junction.

Conclusions: Obesity was associated with reduced disc height in the lumbar spine, but not at the lumbosacral junction, suggesting these joints may have different risk factors. There was also evidence for an inter-relationship between obesity, lumbar disc height and recent pain, suggesting that structural changes have a role in back pain and may in part explain the association between obesity and back pain.